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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,766

01/03/2007

Jun Kitakado

065933-0270

6931

20277 7590 01/16/2009
MCDERMOTT WILL & EMERY LLP
600 13TH STREET, N.W.
WASHINGTON, DC 20005-3096

EXAMINER

SARWAR, BABAR

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

01/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/577,766	Applicant(s) KITAKADO, JUN	
	Examiner BABAR SARWAR	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 10-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. **Claims 1-9** have been cancelled as per preliminary amendment.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **Method of Determining Transmission rate by Controlling Adaptive Modulation Scheme.**

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1, 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Awad et al. (US 2004/0022177 A1), hereinafter referenced as Awad.

Consider **claim 1**, Awad discloses a base station apparatus comprising: a communication unit which communicates with a predetermined terminal apparatus at a variable transmission rate (**Abstract, fig.1 elements 2, UE2, UE11, UE50, Base station and User equipments are communicating with each other, therefore, there exists communication units. Since they are in communication, therefore, they are predetermined as well**); a transmission rate varying unit (**Abstract, threshold/ transmission rate is adjusted based on transmission quality ranges, therefore,**

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there exists transmission rate varying units) which performs a processing of varying a transmission rate of an uplink or downlink according to a channel quality of the terminal apparatus **(Abstract, Para, 0012-0019, figs.1, 4, 6, 8, and 16)**; a detector which detects information on a degree of priority for either the uplink or downlink from among signals received from the terminal apparatus **(Abstract, Para, 0012-0019, figs.1, 4, 6, 8, and 16, transmission rate/threshold values are unchanged based on transmission quality, therefore detecting units)** ; and a communication control unit **(Abstract, transmission rates are maintained i.e. control units)** which maintains a transmission rate based on the detected degree of priority **(Abstract, Para, 0012-0019, 0026-0036, 0040-0042, 0046-0051, 0073-0081, 0103-0108 and claims 20-23, figs.1, 4, 6, 8, and 16).**

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-12 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Awad et al. in view of Tiedemann et al. (US 2007/0206623 A1), hereinafter referenced as Tied.

Consider **claim 11**, Awad teaches a base station apparatus, comprising:
a communication unit which communicates with a predetermined terminal apparatus at

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a variable transmission rate (**Abstract, fig.1 elements 2, UE2, and UE11**). Awad further discloses a detector which detects information on a degree of priority for the downlink from among signals received from the terminal apparatus; and a communication control unit which maintains a transmission rate of the uplink if the downlink has a higher degree of priority (**Abstract, Para, 0012-0019, 0026-0036, 0040-0042, 0046-0051, 0073-0081, 0103-0108 and claims 20-23, figs.1, 4, 6, 8, and 16**).

Awad does not specifically teach a transmission rate varying unit which measures a quality of a channel for the terminal apparatus and performs a processing of varying a transmission rate of an uplink, resulting from stoppage of a downlink communication according to the quality. Tied discloses a transmission rate varying unit which measures a quality of a channel for the terminal apparatus and performs a processing of varying a transmission rate of an uplink, resulting from stoppage of a downlink communication according to the quality (**Para 0006, 0028, 0042, 0044, 0050-0054, 0111, 0113-0114, figs. 1-3, 8-9, where Tied discloses a channel quality estimator and a scheduler**).

Therefore, it would have been obvious to one of ordinary skills in the art at the time the invention was made to modify Awad by specifically providing a transmission rate varying unit which measures a quality of a channel for the terminal apparatus and performs a processing of varying a transmission rate of an uplink, resulting from stoppage of a downlink communication according to the quality, as taught by Tied, for the purpose of reduced overhead control with the ability to adjust transmission rates as necessary for better quality of service as discussed in Para 0012.

Claim 12, as analyzed with respect to limitations discussed in claim 11.

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Consider **claim 13**, Awad teaches everything claimed as implemented above (see claim 10). In addition, Awad discloses that a base station apparatus further comprising a signal monitoring unit which monitors a type or amount of signals transmitted from and received by said communication unit, wherein said communication control unit does not stop the varying processing in said transmission rate varying unit, according to the type or amount of signals of a line which is required to be prioritized by the information on a degree of priority (**Abstract, Para, 0012-0019, 0026-0036, 0040-0042, 0046-0051, 0073-0081, 0103-0108 and claims 20-23, figs.1, 4, 6, 8, and 16**).

Claim 14, as analyzed with respect to limitations discussed in claim 13.

Claim 15, as analyzed with respect to limitations discussed in claim 13.

Claim 16, as analyzed with respect to limitations discussed in claim 1.

Consider **claim 17**, Awad discloses everything claimed as implemented above (see claim 16). In addition, Awad teaches that if the downlink is determined to be prioritized, said communication control unit disregards an instruction, issued from the base station apparatus, about a change in an uplink transmission rate and if the uplink is determined to be prioritized, it does not request the base station apparatus to vary the transmission rate, regardless of a channel quality of the downlink (**Abstract, Para, 0012-0019, 0026-0036, 0040-0042, 0046-0051, 0073-0081, 0103-0108 and claims 20-23, figs.1, 4, 6, 8, and 16, where Awad teaches unchanged transmission rates/threshold values, when transmission quality is outside the transmission range**).

Consider **claim 18**, Awad discloses everything claimed as implemented above (see claim 16). In addition, Awad teaches that a signal generator which generates a request signal, as information on the degree of priority of a line, for a line to which priority is to be given and which sends the generated request signal to the base station apparatus (**Abstract, Para, 0012-0019, 0026-0036, 0040-0042, 0046-0051, 0073-0081, 0103-0108 and claims 20-23, figs.1, 4, 6, 8, and 16**).

Claim 19, as analyzed with respect to limitations discussed in claim 18.

Claim 20, as analyzed with respect to limitations discussed in claim 1.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 21 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. **Claim 21** defines **a computer program** embodying functional descriptive material. However, the claim does not define a computer-readable medium or computer-readable memory and is thus non-statutory for that reason. (i.e., “When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” – Guidelines Annex IV).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BABAR SARWAR whose telephone number is (571)270-5584. The examiner can normally be reached on MONDAY TO FRIDAY 09:30 A.M -05:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NICK CORSARO can be reached on (571)272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BS/

/BABAR SARWAR/
Examiner, Art Unit 2617

/NICK CORSARO/
Supervisory Patent Examiner, Art Unit 2617

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